Planning for the Future:

Reuse Assessment for the American Creosote Works Superfund Site
Pensacola, Florida

June 2010

Environmental Protection Agency Region 4
Superfund Redevelopment Initiative

prepared for
City of Pensacola, Florida
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Forward

The Environmental Protection Agency's (EPA) primary responsibility at Superfund sites is to ensure the protection of human health and the environment. Consideration of a site's potential future use is an important part of this responsibility under the National Contingency Plan (NCP). The Superfund Redevelopment Initiative (SRI) was created by EPA in 1999 to help communities and stakeholders in their efforts to return environmentally impaired sites to protective and productive use. Conducting a reuse assessment that engages site owners, local governments and other stakeholders in evaluating future use options for a site can help facilitate site stewardship and support the long-term effectiveness of a site's remedy. This reuse assessment evaluates site reuse options and remedial compatibility for the American Creosote Works Superfund Site in Pensacola, Florida.

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American Creosote Works Superfund Site. Source: EPA

Figure 1: Site Location Map (Image Source: National Aerial Imagery Program 2006, provided courtesy of the City of Pensacola)

I. INTRODUCTION

Background

The American Creosote Works Superfund Site (ACW Site or Site), located in Pensacola, Florida, includes an 18-acre former creosote wood treating facility and surrounding areas. Wood treating operations, active at the ACW Site from 1901-1981, led to the contamination of site soils, sediments, sludges and ground water. The ACW Site was placed on EPA's National Priorities List of Superfund Sites in 1983. The primary contaminants of concern at the Site are dioxin, volatile organic compounds (VOCs), poly aromatic hydrocarbons (PAHs) and pentachlorophenol (PCP).

Site Overview and Remedy Status

The ACW Site includes three Operable Units (OUs): OU 1 addresses contaminated soils, sediments and sludges from the Site and surrounding areas; OU 2 addresses ground water contamination; and OU 3 addresses specifically off-site dioxin contaminated soils. EPA is investigating the need for remediation to address dioxin contamination from surrounding areas. In the near future, EPA will be working with the community to amend the OU 1 Record of Decision (ROD) to incorporated remedies for OU 3 soils.

Table 1. Anticipated Remedial Timeline

Remedial Activity	Approximate Date
Record of Decision - OU 3 / Amended Record of Decision - OU 1	September 2010
Remedy Design	Fall 2011
Remedy Construction	2012

Reuse Assessment Purpose

In 2001, EPA provided a reuse planning grant to the City of Pensacola to develop a plan identifying potential future site uses and strategy for returning the ACW Site to reuse. After an 18-month community-based planning process, the ACW Site Steering Committee adopted a reuse plan for the Site in 2003 (2003 Reuse Plan).

A recent change in remedial action levels for dioxin contaminated soils has prompted EPA to evaluate additional site constraints that may need to be considered in implementing the 2003 Reuse Plan.

The purpose of this reuse assessment is to evaluate the compatibility of the 2003 Reuse Plan given current site information and anticipated remedial plans and to make recommendations to ensure that the 2003 Reuse Plan can be successfully implemented. This reuse assessment documents community site reuse goals, summarizes previous site and neighborhood reuse planning efforts, analyzes property ownership, and remedial considerations and recommends potential modifications to the 2003 Reuse Plan that could allow for the implementation of the plan under a range of potential remedial action alternatives.

Looking east from western edge of ACW Site. Ground water extraction lines are visible in the foreground.

II. Community Reuse Goals

Interviews with community stakeholders and City of Pensacola staff were conducted to identify current goals for the reuse of the Site.

Sanders Beach Community Association

The Sanders Beach Community Association (SBCA) is a community group representing the residents of the neighborhood located south of the ACW Site. Members of the SBCA were involved in the development of the 2003 Reuse Plan, and the SBCA is designated as the Technical Assistance Group (TAG) for the ACW Site. According to members of the SBCA, neighborhood residents see the ACW Site as an opportunity to create open space and park land that would expand recreational opportunities in the neighborhood and form a buffer between residential homes to the south and commercial and manufacturing uses to the north. SBCA reuse preferences and goals are outlined in greater detail below.

Open space and recreation preferences

- Include amenities for residents, such as a dog park, walking trails, a labyrinth, picnic tables or benches.
- Use native vegetation as a cost-effective, low-maintenance cover.
- Consider playground with natural features, such as mounds or natural ground cover.
- Ensure pedestrian accessibility from south.
- Limit north-south vehicular access.

Mixed-Use Commercial Residential preferences

- Ensure that commercial uses are limited to small-scale retail shops.
- Limit large-scale commercial or manufacturing uses.
- Limit residential uses to second story condo/apartment units above shops.

General neighborhood goals

- Improve sidewalks throughout neighborhood.
- Implement Main Street Corridor revitalization initiatives, including streetscape and gateway developments.
- Establish ACW Site as an amenity to help spur additional development, such as the proposed Western Gateway District (See Neighborhood Planning Considerations on page 6).

City of Pensacola

The City of Pensacola's Community Development Department is also invested in the 2003 Reuse Plan for the Site. The city's primary reuse goals for the ACW Site are to ensure that the general mixed–use commercial and recreational land use designation is not changed as a result of further remedial activities. Additional city goals and considerations related to the ACW Site are outlined below.

- Ensure the 2003 Reuse Plan can be implemented with general land use designations as recreation and mixed-use commercial retail/office and residential.
- Rezone the site from industrial to recreational and commercial mixed-use.
- Consider ownership transfer alternatives for ACW Site, including potential city acquisition of Site properties.
- Build upon ACW Site reuse as a catalyst for Western Gateway District along Main Street.

III. Reuse Planning to Date

This section of the report re-caps site and neighborhood planning efforts to date highlighting the recommendations of the 2003 Reuse Plan for the ACW Site and recent neighborhood revitalization considerations.

2003 Reuse Plan Recommendations

The preferred reuse scenario identified in the 2003 Reuse Plan (see Figure 2) includes the following components:

- Park and open space
- Mixed-use commercial retail, office and residential uses
- Environmental historic resource building
- Parking areas
- Infrastructure and streetscape improvements for Gimble, Main, "I", "L" and "F" Streets

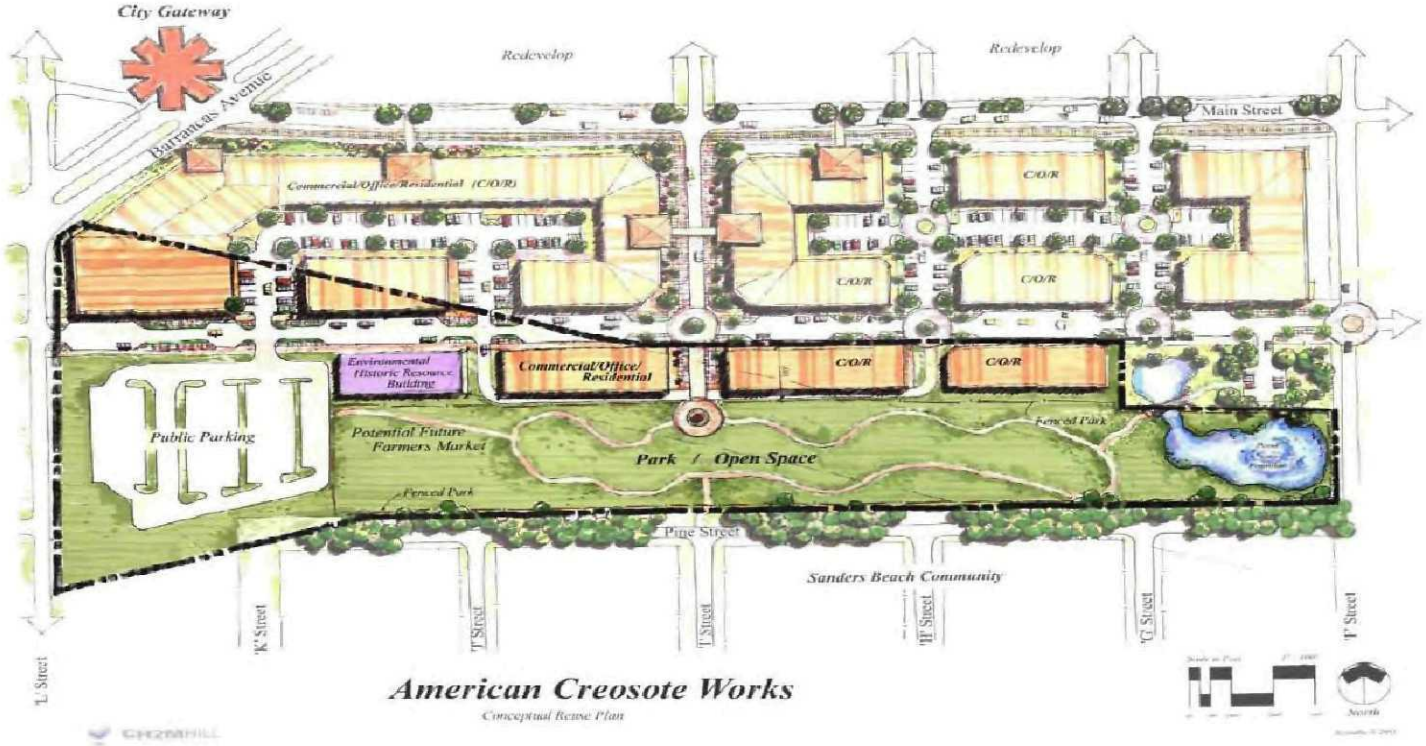


Figure 2: 2003 Reuse Plan

Surrounding Land Use and Neighborhood Planning Considerations

The ACW Site is currently zoned for industrial use and is located in a transitional area. Single-family residential uses are located to the south. Commercial and industrial zoned areas to the north, west and east of the Site include a patchwork of occupied and vacant properties. City planning recommendations for the Westside Neighborhoods, outlined in the 2007 Westside Community Redevelopment Area (CRA) Plan, recognize the transitional character of land uses in the vicinity of the Site and outline future land use and transportation strategies for West Main Street and the ACW Site. The black dashed line shown on Figure 3 delineates the boundaries of the Westside CRA and Figures 4 and 4a are excerpted from the Westside CRA Plan.

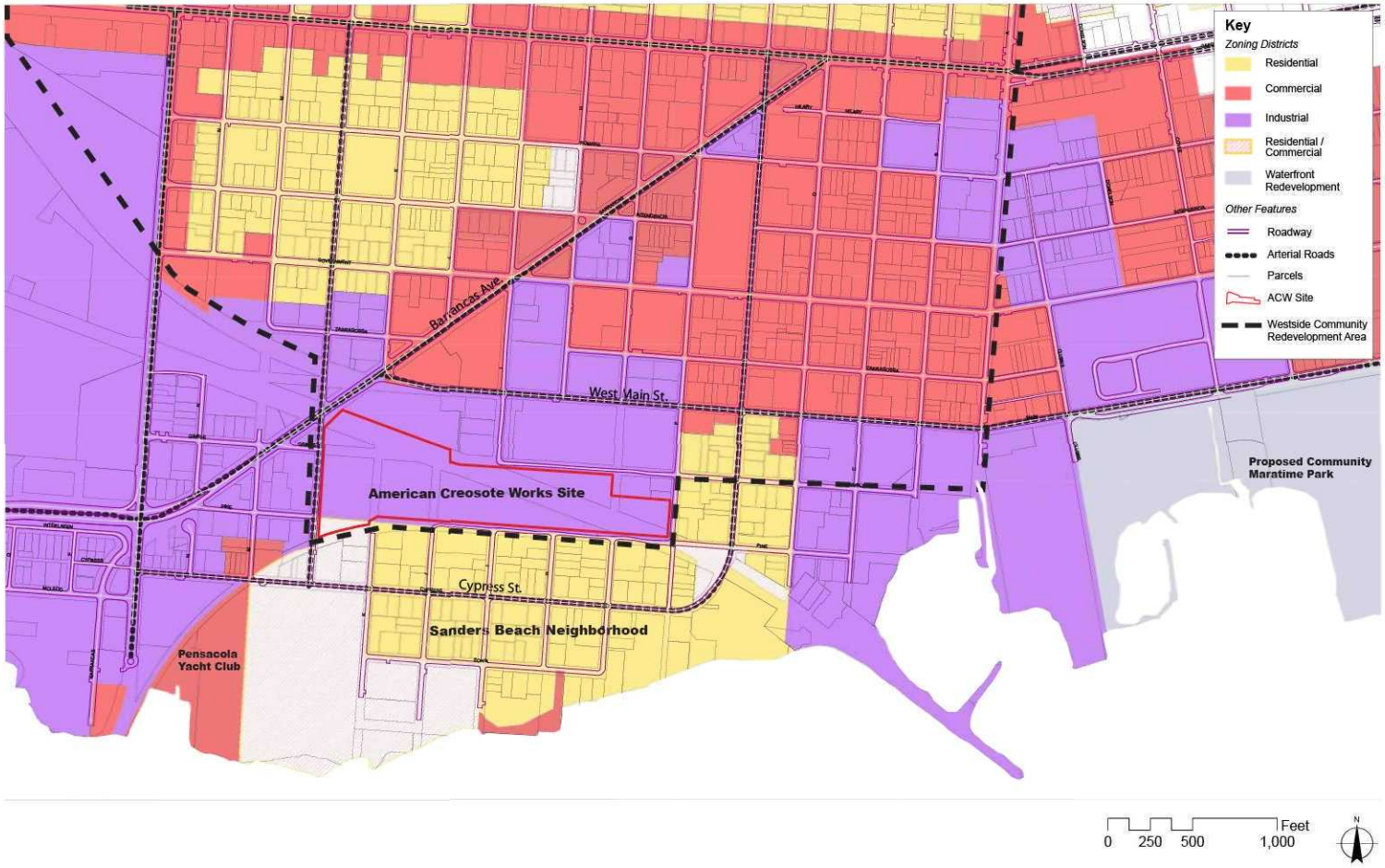


Figure 3: Zoning

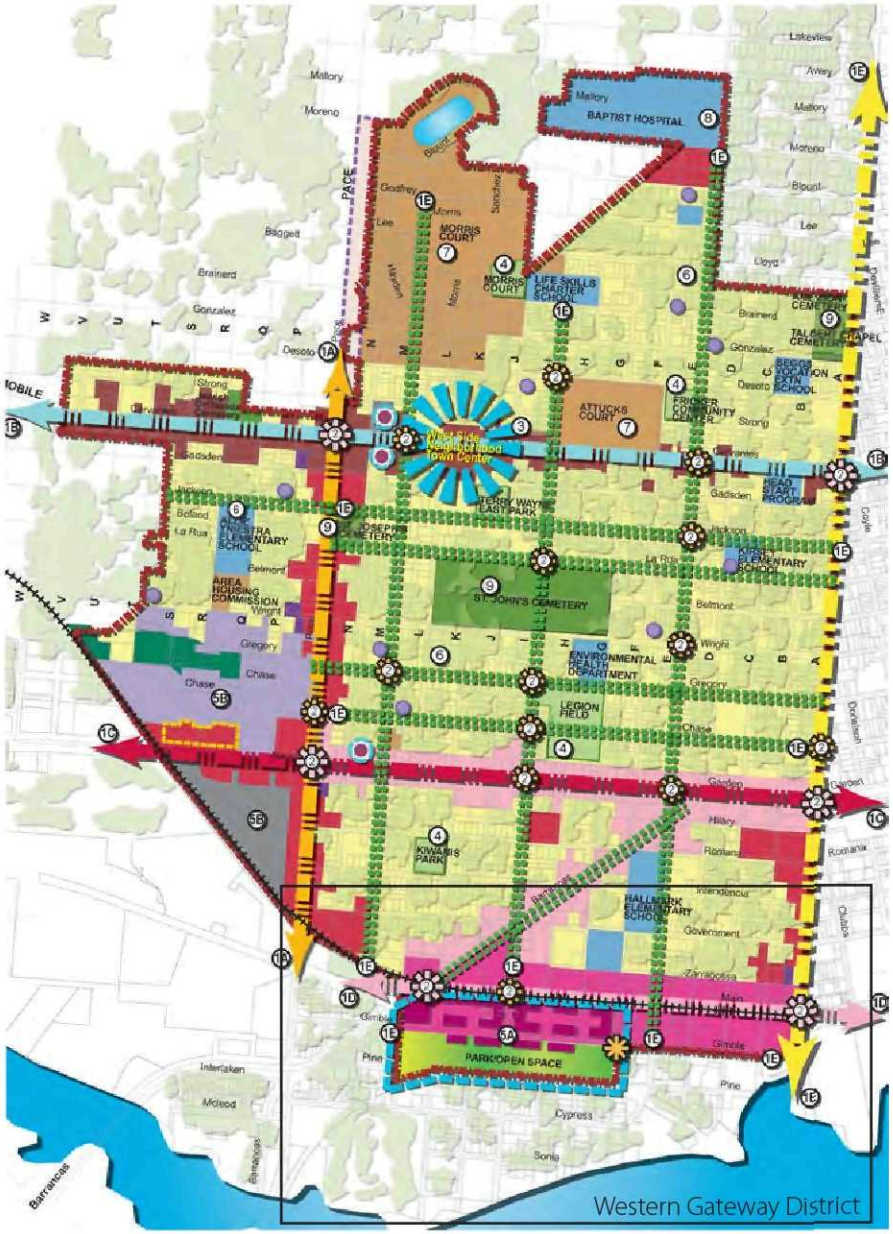


Figure 4: Westside CRA Plan (Source: City of Pensacola, 2007)

The West Main Street corridor, located at the southern edge of the Westside CRA (see Figure 4), is designated as the Western Gateway District. The goal of the Western Gateway District is to create a destination commercial and mixed-use corridor along West Main Street that complements the character of existing residential neighborhoods. Recommendations for the district are summarized below.

Western Gateway District Action Strategies:

- Pursue phased approach for timely cleanup of ACW Site.
- Improve streetscape and infrastructure along Main Street between Barrancas Avenue and Downtown / Waterfront areas.
- Promote commercial and neighborhood retail development as transition zone between residential and industrial uses.
- Create Western Gateway Overlay zoning district.

The Westside CRA Plan incorporates the ACW Site's 2003 Reuse Plan recommendations into the revitalization strategy for the neighborhood and affirms the city's investment in the reuse of the ACW Site.

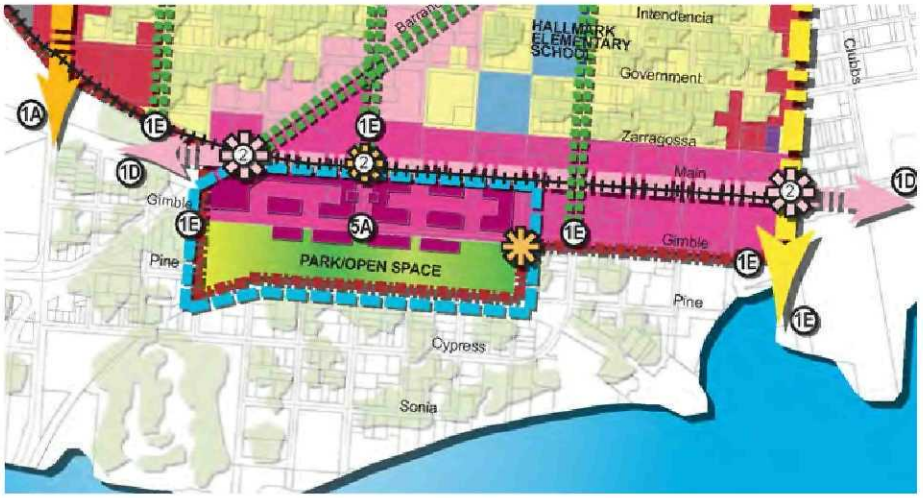


Figure 4a: Western Gateway District (inset)

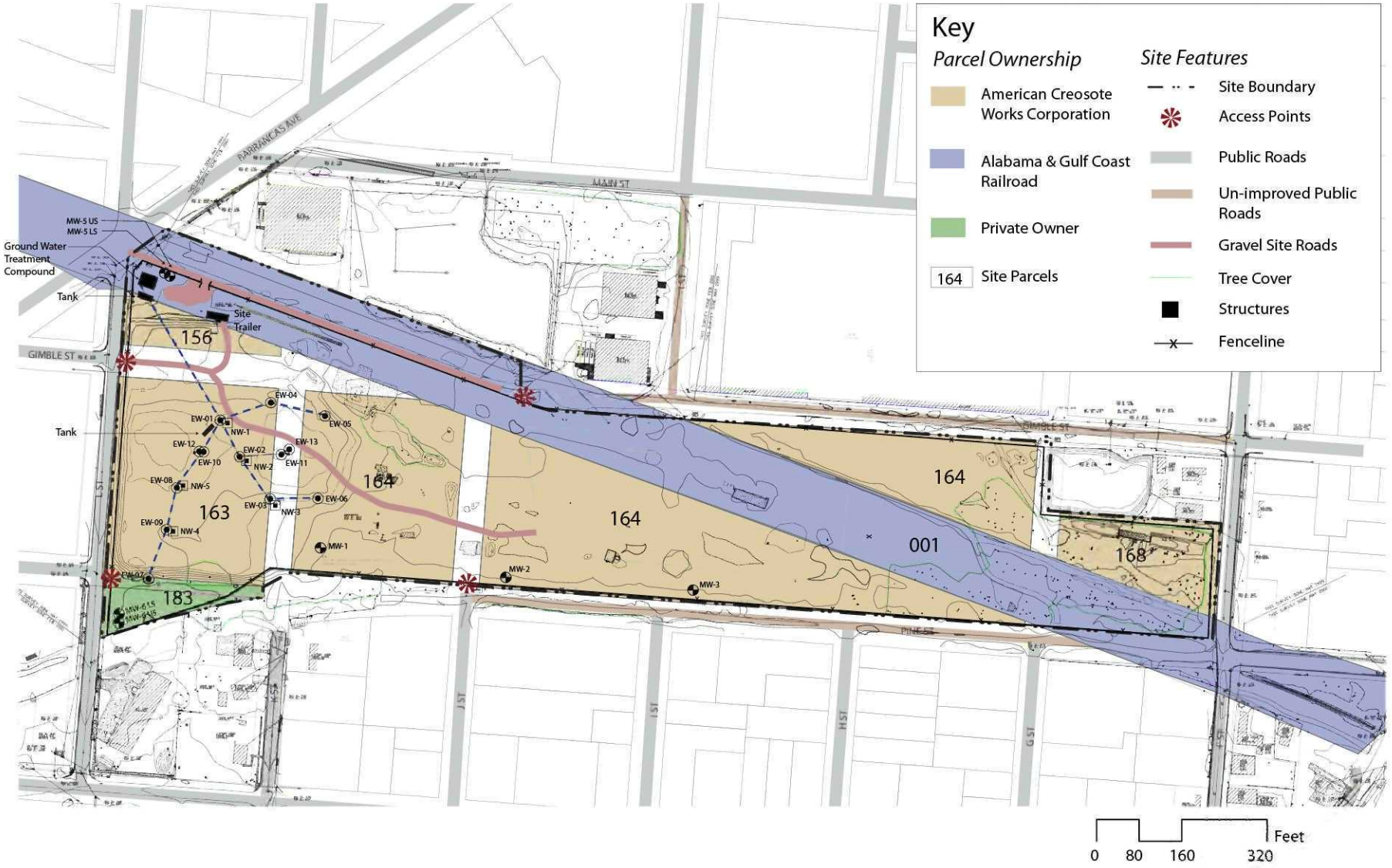


Figure 5: Property Ownership

IV. Reuse Suitability Analysis

This section of the report analyzes site ownership issues, remedial constraints, reuse considerations, and proposes modifications to the 2003 Reuse Plan to help ensure the plan's compatibility with potential future remedies at the Site.

Ownership

Property Ownership & Parcel Configuration

The 18-acre ACW Site includes city right-of ways plus six separate parcels listed below.

Table 2. Parcel Ownership

Owner	Parcel Size (acres)	Parcel ID #
American Creosote Works	7.5	000S009080-001-164
American Creosote Works	0.9	000S009080-011-168
American Creosote Works	2.5	000S009080-001-163
American Creosote Works	0.4	000S009080-002-156
John D. Barksdale	0.4	000S009080-001-183
Alabama & Gulf Coast Railway	5.5	000S009090-006-001

The six parcels, owned by three different parties, are fragmented by public rights-of-way and the Alabama & Gulf Coast Railway property which cuts a diagonal across the Site (see Figure 5 – Property Ownership Map). A single owner would likely need to consolidate these parcels into one or two properties in order to implement the 2003 Reuse Plan.

Acquisition Considerations

The American Creosote Works Company (ACW), which currently owns four of the parcels at the Site, filed for Chapter 11 bankruptcy in 1982. The four parcels under ACW ownership are currently tax-delinquent. The City of Pensacola has considered acquiring the tax-delinquent ACW properties through either a tax deed sale or process of eschetement. Neighboring Escambia County is pursuing a similar acquisition process to gain ownership of tax-delinquent properties at the Escambia County Wood Treating Site. The City of Pensacola would likely consider a similar model for acquisition of the ACW Site.

A U.S. Department of Justice (DOJ) stipulation, filed in 1988, outlines an agreement between the DOJ, EPA, Florida Department of Environmental Regulation (DER), American Creosote Works and its creditor Savings Life Insurance that the net proceeds of the sale of American Creosote Works properties "shall be distributed fifty percent to Savings Life Insurance … fifty percent to U.S. EPA and Florida DER…"

The Alabama and Gulf Coast Railway property is part of a larger rail road right of way that traverses the western half of the city. Outright acquisition of the railway right-of-way is unlikely. However the city could potentially negotiate a use agreement, such as an easement, to allow for non-structural reuse of the railroad property.

ACW's bankruptcy status, stipulation regarding the sale of ACW property, and the need for a use agreement with the Alabama and Gulf Coast Railway are challenges that will need to be addressed by a potential owner interested in acquiring and consolidating the properties.

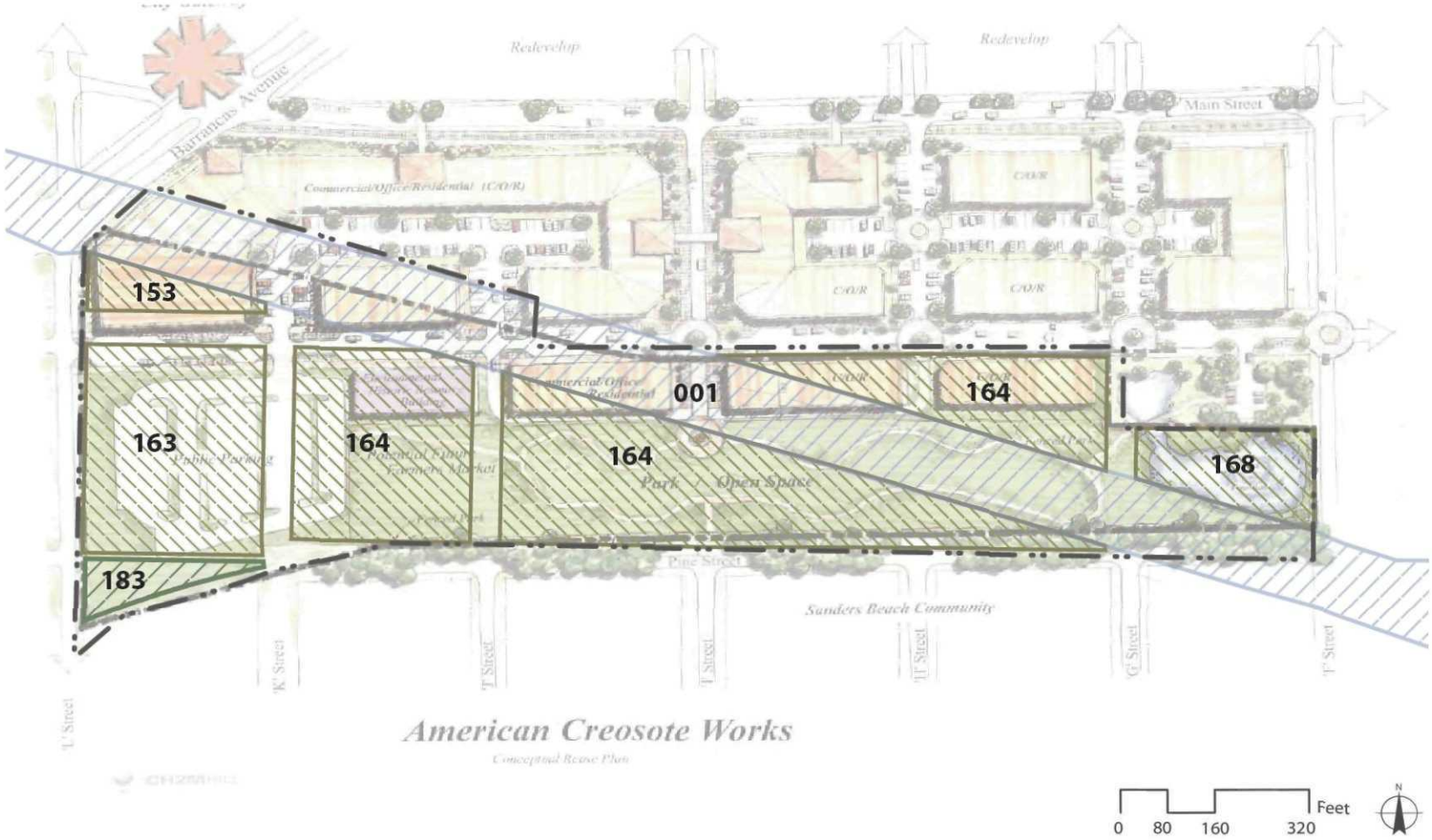


Figure 6: Property Ownership Considerations

Property Ownership & Reuse Considerations

Figure 6 delineates the current site parcels (hatched pattern) along with the 2003 Reuse Plan; Table 3 below clarifies current ownership status and outlines recommendations for integrating ownership considerations in the reuse plan. ACW properties (parcel numbers 153, 163, 164 and 168 on Figure 6) could be consolidated into one or two parcels to facilitate reuse.

The 2003 Reuse Plan proposes mixed-use development along Gimble Street. The proposed buildings are located within the railroad right-of-way. The challenges of acquiring railroad property or locating permanent structures within a right-of-way represent obstacles to the implementation of the plan. Mixed-use development areas could be re-located to a suitable location within the consolidated ACW property to avoid locating permanent structures in the railroad right-of-way.

Table 3: Ownership Considerations

ACW Properties Parcel #: 153, 163, 164, 168	**Railway Property** Parcel #: 001	**Private (Barksdale)** Parcel #: 183
Current Status: Vacant **Ownership Considerations:** • Potential for ownership transfer through tax deed sale, or eschetement. • Multiple tax-delinquent parcels likely need to be consolidated under a single, viable owner. • Proposed structures would likely need to be consolidated within ACW properties.	**Current Status:** In-active railroad property **Ownership Considerations:** • Ownership transfer is unlikely. • Structures proposed within railway property likely need to be re-located to ACW properties. • Railway property likely suitable for park or stormwater retention areas.	**Current Status:** In use for temporary storage **Ownership Considerations:** • Potential for ownership transfer via sale or property swap. • No reuse plan components proposed for this parcel.

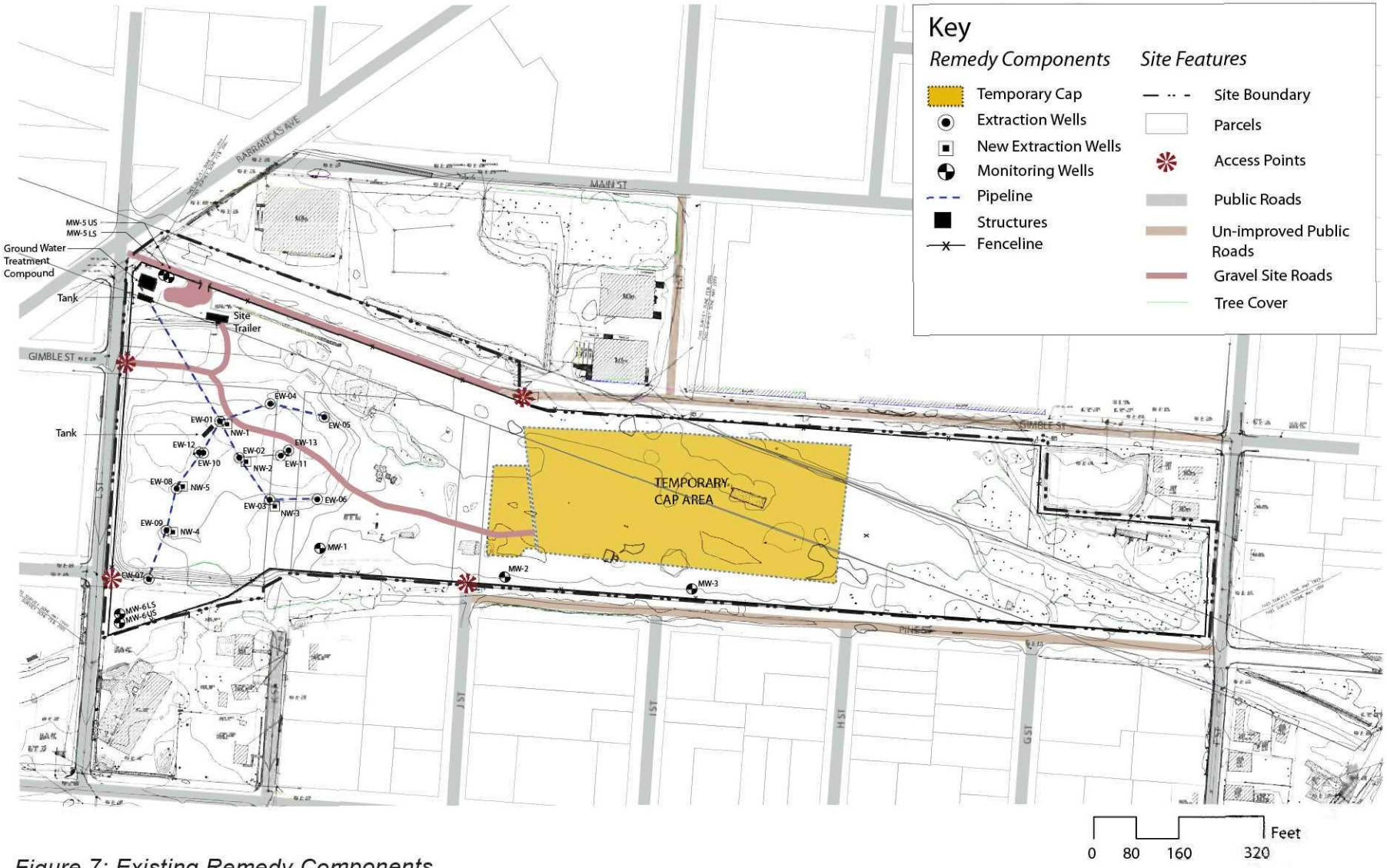


Figure 7: Existing Remedy Components

Remedial Considerations

Existing Site Remedy

There are currently three Operable Units (OUs) at the ACW Site. Remedial considerations for the three OUs are discussed below, and the site's existing remedy components are illustrated in Figure 7.

OU 1: Contaminated Soils, Sediments & Sludges

In 2003, an interim remedial action was completed, implementing the 1988 OU 1 ROD. The remedial action included excavation of contaminated sludge, soil and sediment from properties surrounding the ACW Site including the Pensacola Yacht Club (PYC), and residential properties at the Yachtsmen Condominiums, East Side Residence, West Side Residence, and in the Gimble Street area. Approximately 26,000 cubic yards of excavated soils were stockpiled on the ACW Site and covered with a temporary soil cap. An additional 2,000 cubic yards excavated from the off-site Southeast Ditch was consolidated on site in 2009, and additional soils to be excavated from the Pensacola Yacht Club Ditch and western portions of the ACW site will also be consolidated in the on-site capped area.

The current remedy for the OU 1 on-site soils achieves a commercial/industrial cleanup standard, which is expected to be protective of mixed-use and recreational future land uses envisioned for the Site in the 2003 Reuse Plan.

OU 2: Ground Water

Ground water contamination at the Site is being addressed through an extraction and treatment system. The OU 2 ROD, signed in 1994 and implementation is underway. An initial phase included the installation of 13 wells, and an above ground collection and treatment system on the western portion of the ACW Site. The ground water remedy components are designed to extract and treat Dense Non-Aqueous Phase Liquid (DNAPL) compounds from the site's groundwater. In 2009, the ground water remedy was expanded to include five additional extraction wells, within the same general area as the existing system.

OU 3: Dioxin Contaminated Soils

Since, the selection of the OU 1 remedy, the State of Florida's dioxin cleanup standard for residential soils was revised from a concentration of 1 parts per billion (ppb) to a more protective level of 7 parts per trillion (ppt). Contaminated soils at off-site properties were initially remediated to the 1 ppb dioxin standard. Preliminary Remedial Investigation soil sampling results indicate that residential soils at many off-site properties exceed the 7 ppt standard. A focused Feasibility Study (FS) is underway to evaluate cleanup standards and potential disposal alternatives for dioxin contaminated soils. If the 7 ppt standard is selected, soils would likely be excavated from residential properties. On-site consolidation and off-site disposal will likely be among the remedial action alternatives evaluated in the FS.

EPA plans to combine OU 1 and OU 3 into a single OU that addresses all contaminated soils at the Site, which will require a ROD Amendment for OU 1. EPA plans to complete the OU 1 ROD Amendment by September 2010.

Ground water treatment compound at the ACW Site.

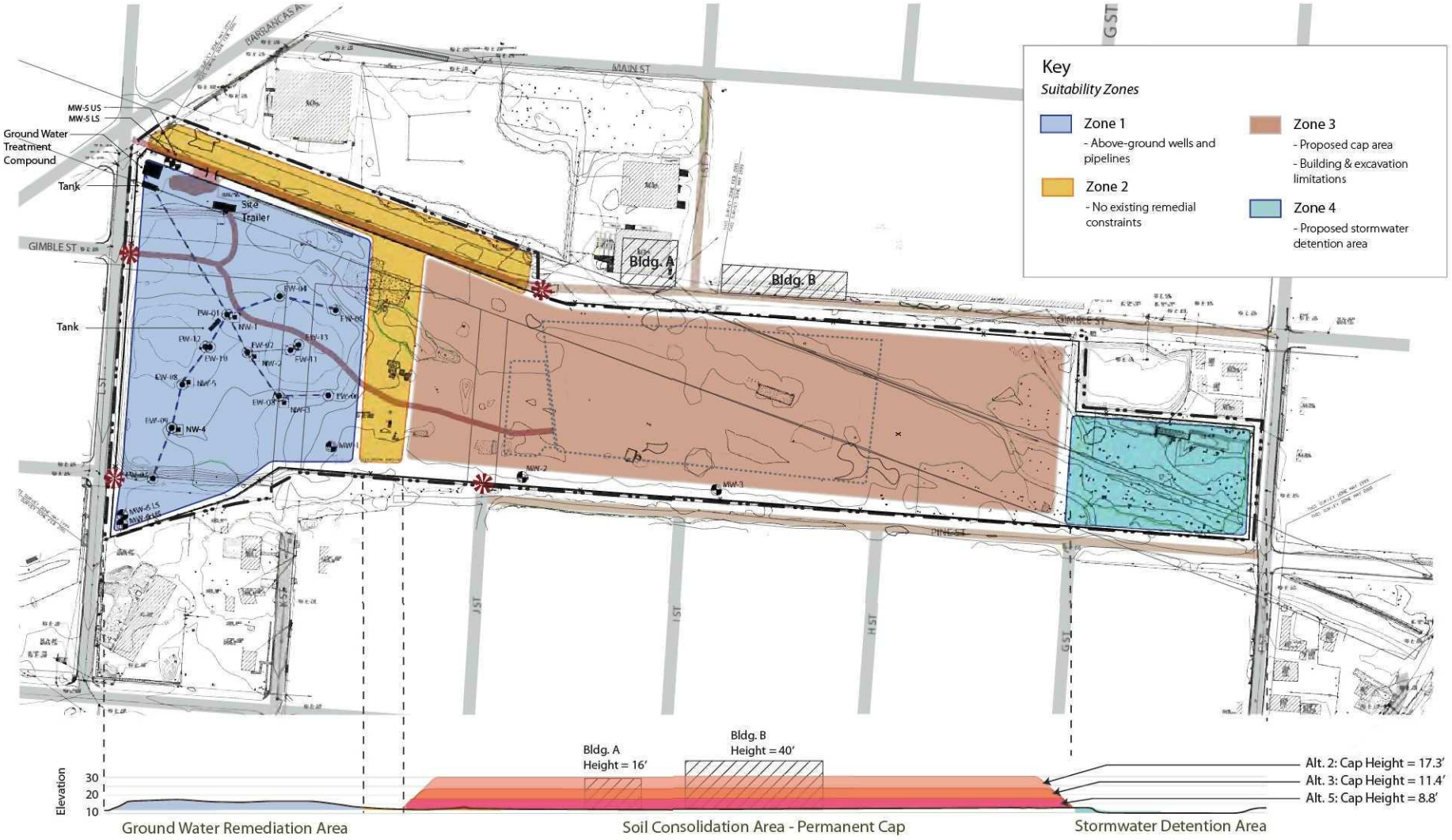
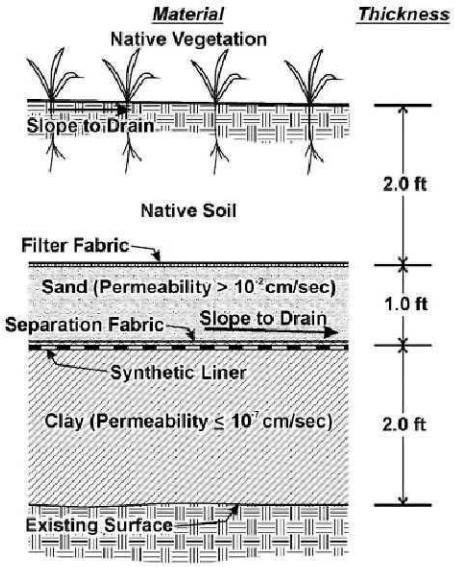


Figure 8: Potential Remedial Constraints

Potential Remedial Constraints

EPA has identified preliminary remedial action alternatives for evaluation in a Feasibility Study. The alternatives currently considered for evaluation would address contaminated soils, including existing on-site soils contained within the temporary cap area as well as off-site soils from surrounding residential and commercial properties. EPA's anticipates that all the remedial action alternatives being considered will include the four remedial zones that have been identified in Figure 8: Zone 1 - ground water remedy components, Zone 2: no remedial constraints, Zone 3 - proposed cap area, Zone 4 - proposed stormwater detention area.

The remedial action level or cleanup standard for off-site soils and the decisions regarding the disposal locations for these soils will affect the volume and height of the on-site cap area (see Zone 3 on Figure 8).



Typical Landfill Cap Construction

Table 4 below lists the remedial alternatives under consideration for off-site soils in the left-hand column. Additional columns list the soil volumes to be removed, soil volumes to be contained on site, size of cap area and approximate height of cap under each scenario. Alternatives 2-4 assume that all off-site soils would be consolidated on site within the capped area. Alternatives 5-7 assume that most of the off-site soils would be shipped to a suitable off-site landfill for disposal, resulting in a smaller volume of soils remaining on the Site and thus a lower cap height.

Given these remedial alternatives, the height of the cap could range from 8.8 feet to as high as 17.3 feet. Figure 8 includes a section view of the Site that illustrates three potential cap heights relative to surrounding grades and buildings. The on-site disposal alternatives would likely result in a cap height that is significantly higher than surrounding uses. For any of the remedial alternatives, grade transitions will be an important factor to consider in the remedial design phase and implementation of the reuse plan for the Site.

Table 4. Potential Remedial Action Alternatives

Remedial Alternative	Dioxin Cleanup Goal (ppt)	Approx. Volume of Soil to be Excavated OU3 (cubic yards)	Approx. Volume of Soil to be Excavated OU1 (cubic yards)	Approx. Volume of Soil to Remain on-site (cubic yards)	Approx. Area On-site Cap (acres)	Approx. Height On-site Cap (feet)
1	0	-	-	-	-	-
2	7	71,386	41,400	112,786	8.34	17.3
3	1,000	23,814	41,400	65,214	8.34	11.4
4	Site Attributable	50,260	41,400	91,660	8.34	14.5
5	7	71,386	41,400	41,400	8.34	8.8
6	1,000	23,814	41,400	41,400	8.34	8.8
7	Site Attributable	50,260	41,400	41,400	8.34	8.8

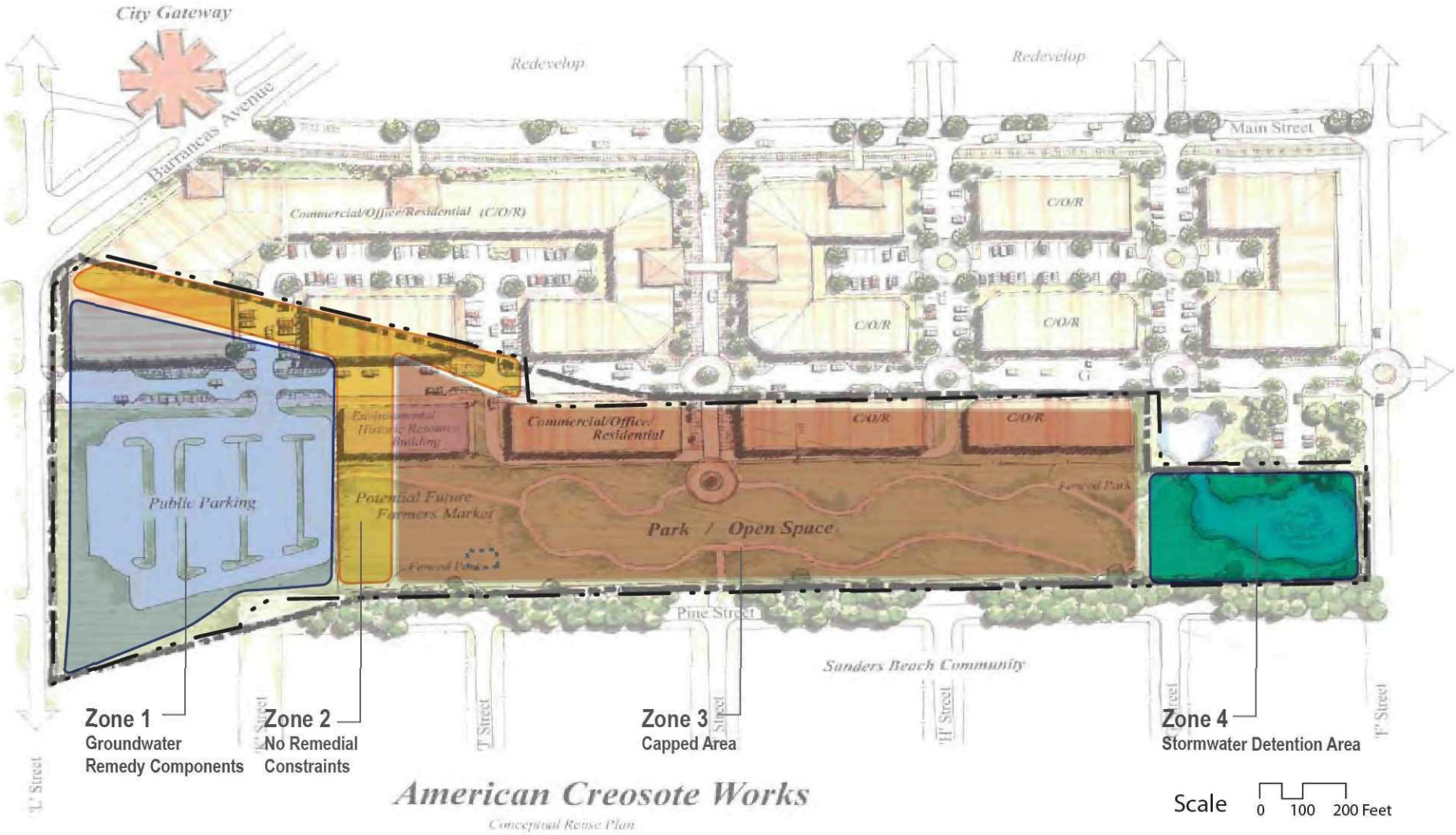


Figure 9: Reuse Considerations

Reuse and Remedial Compatibility

Figure 9 shows how the potential remedial constraints would affect the 2003 Reuse Plan. Table 5 below divides the Site into four remedial zones and lists the remedy components, proposed uses from the 2003 Reuse Plan and compatibility considerations for each remedial zone.

Park uses envisioned in the 2003 Reuse Plan would likely be compatible with the proposed cap area. However, mixed-use development components of the plan encroach on the proposed foot print of the cap area.

The construction of buildings along the northern edge of the Site presents several challenges. Locating buildings on top of the cap area would limit future access to consolidated soils and require the integration of building footings and cap design. Reducing the size of the proposed cap footprint could potentially accommodate for buildings at this location but would require a significantly higher cap across the Site in order to handle anticipated soil volumes.

The proposed reuse plan modifications highlighted on pages 17 and 18 recommend an alternative configuration of future site uses to ensure compatibility with anticipated remedy components.

Table 5. Reuse Considerations

Zone 1	Zone 2	Zone 3	Zone 4
Remedial: • Above ground extraction wells pipelines **Reuse:** • Parking & structures with access to "L" Street and Gimble St. right-of-way **Considerations:** • Replace extraction & monitoring wells with flush-mounted well heads • Bury pipeline network • Consider relocation of ground water treatment compound • Consider locating structures away from pipeline network and parking areas would likely need to be paved	**Remedial:** • No known remedial constraints. **Reuse:** • Structures and open space (temporary farmers' market). **Considerations:** • Limited access to existing improved roads. • Southern portion potentially suitable for structures.	**Remedial:** • Consolidated soils with clay cap and vegetated surface. **Reuse:** • Passive park / open space / trails (south); Structures (north). **Considerations:** • Park uses (south) likely compatible with cap. • Structures would encroach on foot print of consolidation area. • Building and excavation restrictions likely required for cap area.	**Remedial:** Storwater retention area to capture runoff from capped area. **Reuse:** Landscaped retention pond. **Considerations:** • Surface area and volume are to be determined; • Accessible from Pine St. & "F" St. • Opportunity to consolidate retention area and allow for additional structural development.

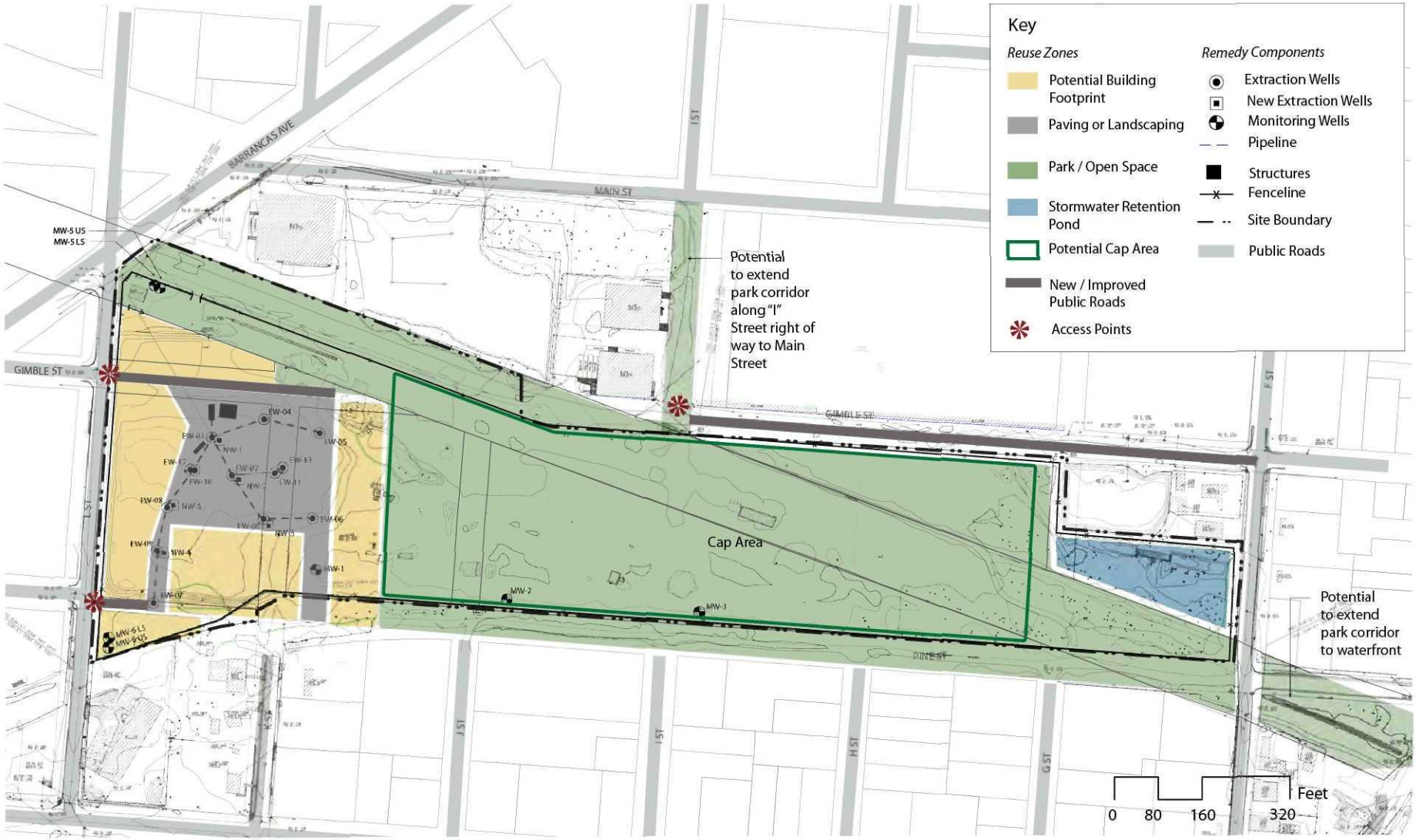


Figure 10: Modified Reuse Framework

Recommended Reuse Plan Modifications

The 2003 Reuse Plan could be modified in order to accommodate a larger cap area, as discussed in the remedial considerations section (see pages 15 and 17), and address the railroad right of way considerations, discussed in the ownership considerations section (see page 11). The modified reuse framework presented on page 18 illustrates how a larger park and open space concept could allow for recreational uses across the Site with mixed-use commercial and residential uses re-located to the western half of the Site.

The illustrative reuse framework presented in Figure 11 below shows how mixed-use development consolidated along Barrancas Avenue and "L" Street could compliment the redevelopment of areas north of the Site, as envisioned in the 2003 Reuse Plan. A park could be expanded to include greenway connections from the site to Barrancas Avenue, West Main Street and the waterfront to the south (see Figure 12).

Figure 11. Illustrative Reuse Framework

V. Conclusions

The following section summarizes the findings of the reuse suitability analysis and documents considerations identified by city and community stakeholders that could help to inform remedy selection, remedial design and implementation of the site's reuse plan.

Summary of Findings

The reuse assessment findings indicate that:

- 2003 Reuse Plan can be implemented with some modification, and the primary elements of the plan would be feasible under the range of remedial alternatives being evaluated.
- Modification could include a larger cap area and relocation of proposed mixed-use development to the western half of the Site.
- The modified reuse plan maintains the concept of buffering the single-family neighborhood with a publicly accessible open space, while accommodating for mixed-use development along the Barrancas Avenue arterial.
- Remedial design and final site reuse plan layout will need to consider transitions from the surrounding grade to top of the capped area.

Figure 12. Potential Greenway Connection to Waterfront

Remedy Selection Considerations

- City staff have expressed concern that remedial alternatives requiring a 17-foot-high consolidation area and cap at the Site would be too high to effectively support recreational reuse and would be out of scale with surrounding residential neighborhoods.
- Community members have requested that EPA provide visuals of the proposed remedial alternative, including examples of similar sites, to understand the scale of the selected cap height in relation to the surrounding land use.

Remedial Design Considerations

City and community stakeholders identified a number of considerations that could be addressed during the remedial design phase such as:

- Ensure drainage is properly managed and does not adversely impact surrounding properties.
- Consider vegetative cover options that support the anticipated recreational use.
- Develop grading transitions from the surrounding land uses to the top of the cap to support the anticipated future recreational reuse and provide appropriate scale transitions to the surrounding neighborhood.
- Consider grading alternatives that provide some variability in the topography consistent with the anticipated recreational land use.

In addition to the issues identified by city staff and community stakeholders, there may be other reuse considerations that can be addressed during the remedial design phase such as future access to and through the Site, final location and configuration of the containment area, and the methods and configuration of stormwater management on the Site.

Implementation Considerations

As EPA proceeds with remedy selection, remedial design and cleanup activities at the Site, the city and community have an opportunity to take additional steps to prepare for the implementation of the reuse plan such as:

- Identifying a viable owner capable of acquiring and consolidating the ACW-owned parcels at the Site.
- Obtaining appropriate easements, rights to the use of railroad right-of-way, or considering potential for acquisition of railroad right-of-way at the Site.

While the City of Pensacola is considering taking ownership of portions of the Site, city staff have indicated that the local government would give further consideration to acquisition options once remedy selection and design activities are complete.

For more information:

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